

EPA Comments – 6/18/14
Draft Small Volume Chemical Water Column Monitoring Sampling Program
Characterization Summary for the Lower Passaic River Study Area
dated February 2014

No.	General Comment
1	<p>In general, over the course of the program, all protocols and procedures specified in Revision 2 of the QAPP (August 2011) were followed along with those subsequently added in Revision 3 (July 2012) which was issued to address the validation of PCDD/PCDFs.</p> <p>With the exception of the inclusion of Method 200.8; all changes were recorded as Field Modifications and submitted to EPA for approval. Significant modifications made over the course of the program were summarized in the document. Also noted were deviations to procedures (i.e., nonconformances) that impacted data quality and/or resulted in variances from the program.</p> <p>All LPR samples from all events (routine, high and low flow) including those at RM 0 and tributaries specified in the QAPP were collected.</p>
2	<p>The Newark Bay Study Area (NBSA) samples are acknowledged in the SV-CWCM Report; however, the NBSA data are not substantively discussed or presented in the text, tables, figures, and appendices (in comparison to the Lower Passaic River data). We expect that NBSA SV-CWCM data evaluation will be performed and documented by Tierra Solutions, Inc. to satisfy the Data Quality Objectives (DQOS; as stated in Section 1.2, page 1-6).</p>
3	<p>Appendices F, J, and K list Target Analyte List (TAL metals) results for field samples, lab QC samples, and equipment blank samples analyzed by Method 200.8. This method is not listed on Table 2-1, and it is not listed in the SV-CWCM Quality Assurance Project Plan (QAPP Version 3; dated July 2012). It also appears as though some metals were reported under multiple methods (e.g., antimony under 200.8 and SW6020), often yielding different results. Please explain (1) why Method 200.8 was used when it was not identified in the QAPP and (2) how result values were selected for data evaluation and presentation from the two analytical methods.</p>
4	<p>Please revise the following Table/Figure titles for consistency (the titles listed in the table of contents and report are not consistent with the titles on the attachments).</p> <ul style="list-style-type: none"> - Table 2-7 "Summary of USEPA Split Sampling for SV CWCM <u>Program</u>" - Table 2-8 "Location of Field and Laboratory Data for SV CWCM <u>Program</u>" - Table 3-1 "Selected Analytes and Physical Parameters for Presentation <u>of Results for the SV CWCM Program</u>" - Figure 3-1 "Flow at Dundee Dam During <u>High Flow Event 1</u>" - Figure 3-2 "Flows and Gage Heights on Tributaries During <u>High Flow Event 1</u>" - Figure 3-3 "Flow at Dundee Dam During <u>High Flow Event 2</u>" - Figure 3-4 "Flows and Gage Heights on Tributaries During <u>High Flow Event 2</u>"

No.	Page No.	Specific Comments
5	Page 1-7, Section 1.3, First paragraph, First sentence	Please revise to say that the nine locations sampled in the LPRSA also included locations above Dundee Dam, Third River, Second River, and Saddle River.
6	Page 1-7, Section 1.2, Second paragraph, Sixth sentence	The text states that samples were collected from “two depths (surface and near bottom) for station in RM 0-17.4”. The location at 17.4 is above Dundee Dam and only a single sample was collected at mid-depth as noted later in the sentence. Please revise the sentence to exclude RM 17.4.
7	Page 1-7, Second Paragraph and Page 1-8, First full paragraph on top of page	<p>Section 1.3 is part of the Introduction and generally describes the parameters analyzed from whole water (unfiltered) and filtered water samples.</p> <ul style="list-style-type: none"> a. Please add a cross-reference to Section 2.2.4, which lists all of the parameters for the SV-CWCM, or include a comprehensive list of whole water parameters in Section 1.3. b. Similar text clarification is requested in the Executive Summary (page ES-2, paragraph at top of page).
8	Page 2-2, First Paragraph (reference to Table 2-3)	<ul style="list-style-type: none"> a. Please state in Section 2.2.1 that the actual mean flow conditions were outside the targeted range for some events, including Routine Event 3 and High Flow Event 1. Moreover, mean flow conditions during Routine Event 1 (2,650 cfs) were similar to High Flow Event 1 (2,830 cfs). b. Please include in the main text the information on neap tide that is listed in Table 2-3, Footnote a.
9	Page 2-4, Section 2.3	Please add a new sub-section to Section 2.3 and describe the sample collection process, particularly to state that metals were field-filtered and physical parameters were laboratory-filtered.
10	Page 2-4, Section 2.3.2, "Sample Identification"	Please include a note (or an explanation on nomenclature) that Newark Bay samples follow a slightly different nomenclature protocol than described, specifically for Event and Station.
11	Page 2-7, Section 2.6, "Field Modification and Nonconformance"	As noted in general comments 1 and 3 above. A Field Modification or nonconformance discussion must be added to this section to explain the need and application of Method 200.8 to the program.
12	Page 2-8, Item No. 7, third sentence	Please correct typographical error: "USEPA agreed to a modified procedure that would allow the field team <u>to sample</u> from shore, rather than from mid-stream."
13	Page 2-8, Item No. 1, sixth sentence	Please correct typographical error (misspelling): "The purpose of <u>collecting</u> two depths..."

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14	Page 3-2, References to maximum flows	To be consistent with Table 2-3, please state the mean flow conditions for High Flow Event 1 and High Flow Event 2.
15	Page 3-2, Section 3.3, First Paragraph (reference to PCB congeners)	Please clarify if the Total PCB Congener concentration represents the sum of validated, detected congener results, or if it is a laboratory-generated summation.
16	Page 4-1, Section 4.0	Please state if the data usability assessment was inclusive of all data collected during the field program (i.e., Newark Bay data, tributary data, and Lower Passaic River data). If the assessment was limited, please state which datasets were evaluated.
17	Page 4-4, Section 4.3.5, Third Paragraph, Last Sentence	Please correct typographical error (missing words): "...one sample from station 12A-CE12-T175 <u>was</u> submitted..."
18	Table 2-1	The text in the "Laboratory SOP" column of the table is partially cut off by the right border of the column. Please re-format the table.
19	Table 2-6	Please include a footnote stating whether or not data validators documented a potential bias in the data.
20	Table 3-1	Please note the typographical error in the footnotes and change "pictograms" to "picograms".
21	Table L-1, Note a	The notation for internal standard areas is listed as an uppercase "I" it should be lowercase "i" as listed under the Rationale column of the table.
22	Figure 2-1	Please clearly mark Routine Event 3 on Figure 2-1, which was planned to capture neap tide.
23	Figure 3-1 and Figure 3-3	Please mark the time of sample collection on the hydrographs in Figures 3-1 and 3-3.
24	Figure 3-5b Cadmium	Figure 3-5b for Cadmium Deep Samples (DS) uses an open circle instead of an open diamond (as presented in the remaining figures of this series). Please correct the symbol to be consistent.
25	Figure 3-22 through Figure 3-29	<ul style="list-style-type: none"> a. Figures 3-22 through 3-29 were prepared with a consistent y-axis maximum. Please adjust the y-axis for the "A-Figures" or Dundee Dam figures in this sequence to increase the legibility of the data. b. Figure 3-25b for mercury has an appropriate y-axis with a maximum value of 300 ug/L. Please consider adjusting the y-axis for the other mercury plots (which are currently plotted at 800 ug/L) to be consistent with Figure 3-25b.

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26	Appendix C, Seawater Trace Metals, Part 1 and Part 2	Please clarify if the "Seawater Trace Metals" were analyzed by Method 6020/6010 as stated in Table 2-1 of the CPG report, or if they were analyzed by Method 200.8 as stated in the CPG electronic data deliverable.
27	Appendix H	<p>Please add a footnote describing why turbidity readings don't correspond to the full sampling duration for the following events:</p> <ul style="list-style-type: none"> - Page H-211 "Newark Bay Northeast at Ebb Tide Near Bottom" - Page H-237 "Newark Bay Northeast at Low Tide Shallow" <p>The first sentence in Section 3.1.2 states "turbidity was continuously measured at the depth of sampling for the entire interval over which the sample was pumped." This statement does not appear to be in full agreement with the data presented in Appendix H and may need to be revised to reflect exceptions.</p>
28	Appendix H	<ul style="list-style-type: none"> a. The turbidity readings are presented on plots with the maximum y-axis value equal to 120 NTU, while the majority of data is less than 20 NTU. This data presentation makes it difficult to discern variability in the turbidity readings. Please re-format the graphics by adjusting the maximum y-axis value to 40 or 60 NTU. b. The inclusion of the horizontal line denoting sampling duration can be confusing, especially because the line is plotted at an arbitrary value of 100 NTU on the turbidity axis. Please consider modifying the data presentation. One possible approach would be to use two colors for data points in the turbidity series: one color for data collected during sampling and a second color for data collected outside the sampling duration. The horizontal line could then be omitted.
29	Appendix H, Page H-221	Please add a footnote describing whether the turbidity readings collected between 8:44 am and 8:50 am (Near Bottom depth) are expected to reflect actual field conditions, or represent a sonde malfunction or perhaps contact of sampling equipment with the sediment bed.
30	Appendix J, Beginning on pdf page 19 of 142	Please correct the typographical error in the title for Appendix J (".../PCDF" rather than ".../PCDV"). The error also appears in the pdf bookmarks.